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Carpenter Ants and Some Suggestions for Their Control

Carpenter ants are among the largest ants found in the U.S., being $\frac{1}{4}$ to $\frac{1}{2}$ inches in length. They vary in color from black to yellowish-red to a combination of black and red. These ants develop through complete metamorphosis: egg, larvae, pupa, and adult. They are social insects, meaning they have a caste system consisting of workers and reproductives (winged kings and queens). There are two types of workers, major and minor, but there is only one queen within the colony.

Carpenter ants produce both male and female reproductives (the kings and queens) in the early spring to summer. These ants then mate and the male quickly dies. The female then sheds her wings and locates a suitable nesting site. These ants normally form their nests in hollow trees, logs, posts, and landscaping timbers. They **do not** feed on the wood, but use it for nesting purposes. They prefer moist, decaying wood or wood that has been damaged by termites.

These ants cannot eat solid food, so they must rely on a liquid diet. They tend to feed on aphid honeydew or tree sap. They can also chew up other insects, such as crickets, mosquitoes, aphids to extract their nutritious liquid. Inside the home, they can feed on such things as honey, syrup, candy, apples, and soda.

Carpenter ants can establish colonies in multiple locations, which can be inside and outside. They can construct two types of colonies, the parent colony and satellite colonies. The parent colony contains the queen, immature ants, and workers, and they are usually found in a tree stump or wood pile outside. The satellite colonies contain a large number of workers, immature ants and reproductive (winged) ants, and these colonies are found within kitchen or bathroom walls, attics, ceilings, or crawl spaces. These ants usually enter human structures from their parent colony by crawling on a tree limb or power line that touches the home, through cracks and crevices, plumbing in the kitchen/bathroom, porches that have wood contacted to soil, openings in the attic, through weep holes, and heating and air conditioning ducts.

Evidence of Infestation

There are a few signs to look for in order to determine if an infestation exists within a human structure. The presence of winged reproductives **continuously** may indicate an infestation (an occasional reproductive does not indicate a colony is present, instead it may just be a scout looking for food). Carpenter ant colonies are immaculately kept, meaning that wood and dead ants are carried out of the nesting site. These materials

are deposited outside of the nest and sometimes pile up on a window seal, floor or in spider webs. If piles are seen, this could mean carpenter ants are living within the structure.

Prevention

To prevent carpenter ant infestations, there are certain key steps to follow. One suggestion is to replace damp or decaying wood in and around the home. Homeowners can minimize damage caused by these ants by identifying their nest sites and eliminating any conducive conditions, such as rotting wood. Homeowners should repair plumbing leaks, drain water away from the house, and provide proper ventilation underneath the house, as well as in the attic. Other suggestions include storing firewood away from the home, removing stumps and logs near the house, and trim trees and limbs to eliminate contact with the house.

Suggestions for Control

The key to eliminating these ants is to locate and eliminate **all** possible nesting sites both indoors and outdoors. To find carpenter ant colonies outside, you can simply follow the trails of ants. Ants move along trails, each following chemical and visual cues. They typically forage at night in large numbers, but single ants can be seen foraging for food sources. These trails are usually located around the edges of driveways or sidewalks, under patio blocks or wood steps, around the edge of foundations, or edges of flowerbeds or lawns.

After colonies have been found both outside and inside, then treatment should be applied. When using insecticides, treat with a residual sprays or dusts containing a variety of active ingredients, such as boric acid, carbaryl, permethrin, cypermethrin, or cyfluthrin. A dust formulation is usually best when applied indoors, since it is ineffective when it becomes wet. In order to apply the dust within the walls, small holes may need to be drilled in window/door frames, wall voids, baseboards and in other areas of nesting. This dust adheres to the surface of the ants and the insecticide is spread within the colony due the constant feeding and grooming habits of the ants. Residual sprays should be applied around the perimeter of the house as well as to the parent colony. Pest management professionals usually should be contacted to control these ants. Homeowners can help the pest professionals by informing them about the ants' movement and sightings. This will help the pest management professional to locate all possible nesting sites.

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